

Claims:

1. A method for feeding signal power to an antenna array comprising several antenna elements (1 - 4), which method is **characterized** in that

- two parallel transmission lines (a-b) and (c-d) are used, in which case the divisions (e) of one (a-b) of the transmission lines are shorter than the nominal wavelength and those (f) of the other (c-d) are longer than the nominal wavelength by the same amount,
- the signal s being fed is divided into two parts, one of which is directed to one of the said two transmission lines (a, (a-b)), and the other to the opposite end of the other line (d, (c-d)), so that the signals travel in the lines in opposite directions, and
- the signals are summed (5) before the antenna elements (1 - 5).

2. A method according to Claim 1, **characterized** in that the direction of the lobe created by the antenna elements (1, 2, 3, 4) is changed by feeding the transmission lines ((a-b), (c-d)) from their opposite ends (b, c), in which case the signals travel in a different direction in the transmission lines, but the mutual phase-differences remain essentially unchanged.

3. An apparatus for feeding signal power to an antenna array comprising several antenna elements (1 - 4), which apparatus includes

- several antenna elements (1 - 4), and
- two transmission lines (a-b) and (c-d) for feeding signal power to the antenna elements,

characterized by

- the divisions (e) of one of the transmission lines (a-b) being shorter than the nominal wavelength and those (f) of the other (c-d) are longer than the nominal wavelength by the same amount,
- means for dividing the signal s being fed into two parts, one of which is directed to one of the said two transmission lines (a, (a-b)) and the other is directed to the opposite end of the other line (d, (c-d)), so that the signals travel in the lines in

opposite directions, and

-summing elements (5), by means of which the signals coming from the different transmission lines can be summed before the antenna elements (1 - 5).